

DX News

•Serving DX'ers since 1933•

Volume 59, No. 29 - August 31, 1992 (ISSN 0737-1659)



Inside...

- 2 .. AM Switch
- 4 .. DDXD
- 11 .. IDXD
- 13 .. Dangerfield Abroad
- 14 .. FM DXD

- 17 .. Formats
- 19 .. For Beginners
- 20 .. In the Beginning
- 21 .. NRD-525 Mod
- 22 .. Musings
- 23 .. Convention Page

From the publisher ...

Hope you've been able to do some quality DX'ing during the waning summer months. Most of my time has been spent in front of the keyboard or pasting little pieces of paper onto bigger. Check out the promo at the bottom of page nine for the results of one of these sessions.

Mangled copies of the bulletin have decreased dramatically since the post office required us to tape the corners of DXN, but should you receive a copy in less than satisfactory condition, replacement copies, as always, are free.

We're holding a copy of DXN which has been sent, twice, to two different addresses and been returned. Please check with the USPS if you aren't sure what your exact mailing address is, and then let us know so we can get DXN to you on time.

They joined

... R obert Goodman, Philadelphia, PA; Theodore R. Hall, Louisa, VA; Don Hutchings, Loves Park, IL; Jeffrey A. Kleppinger, Seattle, WA; Jerry E l y a ,

Super Radio
• Long range performance
\$39.98

7-2885

2 way power with automatic AC/DC switch, 6-1/2" speaker and piezo tweeter. Long range performance.
Available at Ed Marling's - (913) 273-6970, Topeka; check your local General Electric store

Bloomington, IN; James A. Dale, Rosemount, MN; and Lexington E. Smith, KB2VR, Woodbury, CT.

Publications ... Grove Publications - P.O. Box 98 - Brasstown, NC 28902-0098 is offering "propagation Programs - A Review of Forecasting Software" by Jacques d'Avignon. The 47-page book is \$9.95. And fellow Kansan Kannon Shanmugam's "1993 Guide to Shortwave Programs", which includes 20,000 English-language programs from 100 stations worldwide sells for \$15.95. Mention the NRC when you order!

Remaining DXN Schedule, Volume 59:

#	Deadline	Pub. Date
30.	Sept. 18	Sept. 28

DXN Schedule, Volume 60

1.	Oct. 2	Oct. 12	16.	Jan. 29	Feb. 8
2.	Oct. 9	Oct. 19	17.	Feb. 5	Feb. 15
3.	Oct. 16	Oct. 26	18.	Feb. 12	Feb. 22
4.	Oct. 23	Nov. 2	19.	Feb. 19	Mar. 1
5.	Oct. 30	Nov. 9	20.	Feb. 26	Mar. 8
6.	Nov. 6	Nov. 16	21.	Mar. 5	Mar. 15
7.	Nov. 13	Nov. 23	22.	Mar. 12	Mar. 22
8.	Nov. 20	Nov. 30	23.	Mar. 19	Mar. 29
9.	Nov. 27	Dec. 7	24.	April 9	April 19
10.	Dec. 4	Dec. 14	25.	April 23	May 3
11.	Dec. 11	Dec. 21	26.	May 21	May 31
12.	Dec. 18	Dec. 28	27.	June 18	June 28
13.	Jan. 8	Jan. 18	28.	July 16	July 26
14.	Jan. 15	Jan. 25	29.	Aug. 13	Aug. 23
15.	Jan. 22	Feb. 1	30.	Sept. 10	Sept. 20

DX Time Machine

Receptions from the DX log of Max Watkins, Tecumseh, NE: 1923: Oct. 7: KFJX, Independence, MO; Oct. 12: WRC, Washington, DC.; Oct. 13: WTAM, Cleveland, OH; Oct. 15: WBAH, Minneapolis, MN; KFFZ, Dallas, TX; Oct. 20: WRAO, St. Louis, MO; KJFW, Towanda, KS; Oct. 30: WCAS, Minneapolis, MN.

From the pages of DX News:

50 years ago ... from the August 22, 1942 DXN: Frank Coryell, Cleveland Hts., OH, noted, "I never really understood how poor summer reception was until now. It's positively disgusting; I can't even hear KFI until past 3 am, and then only about R-4."

25 years ago ... from the September, 1967 DXN: DX'ing from Antofagasta, Chile, John W. Hoogerheide reported reception of WCKY-1530, KFBK-1530, WPTR-1540, KMOX-1120, and WGBS-710.

10 years ago ... from the August 23, 1982 DXN: The all-time IDXA listed Ray Crawford, New Zealand with 167 countries; Al Slater, England, 130; Ken Mackey, New Zealand, 123; Ben Dangerfield, PA, 118; Hilding Gustafson, IL/FL 109; Art Cushen, New Zealand, 108; Roger Anderson, VA, 105; and Hank Holbrook, MA, 101.

AM Switch

Jerry Starr
c/o WHOT Radio
4040 Simon Road
Youngstown, OH 44512-1320

Status changes in AM stations, supplied by the FCC and listeners

CALL LETTER CHANGES

Old call:

730 WARB LA Covington
740 WMEA MA Cambridge
870 WFKB TN Colonial Heights
900 KKAP TX Floydada
1230 WBB1 VA Abingdon
1280 KLGv TX Longview
1400 KKCB CA San Luis Obispo
1450 KQDI MT Great Falls
1480 WMAX MI Kentwood
1490 WMLM GA Cordele
1520 WMEZ MI Muskegon Heights
1550 KZQQ UT West Valley City

New call:

WASO*
WJIB
WZMC
KAWA
WABN
KARW
KIXT
KMSL
WGVU
WGPI
WQWQ
KRGQ

*WARB-730 first asked for a change to WAFU but had that change set aside in favor of WASO.

APPLICATIONS FOR NEW STATIONS

None

GRANTS FOR NEW STATIONS

1060 AZ Tempe: 5000/500 U2 (replaces the existing license of KUKQ as part of a settlement agreement)
1250 PR Sabana: 1000/250 U4
1470 NC Greensboro: 3500/5000 U2

APPLICATIONS FROM EXISTING FACILITIES

950 WSYA AL Montgomery: dismantle nighttime directional antenna system and operate with 44 watts at night from the daytime transmitter
1040 KEZF OR Tigard: powers to 2200/200
WAMN WV Green Valley: night power to 200 watts
1100 KZPM CA Bakersfield: night power to 5000 watts
1290 KPHP OR Lake Oswego: day power to 3500 watts
1390 KAMO AR Rogers: powers to 1000/125, antenna to U1
1430 KROO TX Breckenridge: day power to 700 watts

GRANTS TO EXISTING FACILITIES

920 WGNU IL Granite City: relocate daytime transmitter site, reduce day power to 450 watts
1480 WCIN OH Cincinnati: powers to 1000/114
1490 WLGW NH Lancaster: relocate transmitter site

OTHERNESS

640 WWJZ NJ Mount Holly: new station has been conducting on-the-air testing for over a month and may be on regular schedule when this reaches you
690 KBBA AR Benton: silent station has new owners, may be returning to the air
770 WTOR NY Youngstown: construction of this new station has hit a snag as a citizen group is protesting the erection of their three 350-foot towers in Lewiston, NY

810 WSJC MS Magee: station is SILENT
850 WPFd TN Fairview: silent station is ON THE AIR
900 WBGG NY Saratoga Springs: silent station is ON THE AIR
WCOR TN Lebanon: silent station is ON THE AIR
920 CKCY ON Sault Ste. Marie: station will go off the air for good on 8-30-92. Owners of both AMs in this market are taking their AM facilities off the air permanently and will combine their FM stations into a joint operation. See 1050 below.
990 WEEB NC Southern Pines: according to the station they run 5000 watts during Critical Hours and 500 watts at night
1030 WJKZ TN White Bluff: station is SILENT
1050 CFYN ON Sault Ste. Marie: station will go off the air 8-30-92, see CKCY-920 above
1080 WKKE NC Saint Pauls: silent station is ON THE AIR
1120 KTCO TX Manor: application to change city of license to Cottonwood and increase night power has been recinded by the station
1130 WEEB PA Waynesboro: station is SILENT and will remain so permanently, the studios have been dismantled and their 3-tower antenna system has been taken down. Looks like this one is gone for good.
1210 WDGR GA Dahlgene: silent station has new owners who expect to return it to the air soon
1250 WWOX MI Bay City: station is SILENT again
1260 WRIP SC Lake City: silent station is ON THE AIR
1340 WKGN TN Knoxville: silent station is ON THE AIR
1350 WCHI OH Chillicothe: silent station is ON THE AIR
1380 WKTJ ME Farmington: station is SILENT
1400 KKNX TX Huntsville: station is SILENT
1440 WYGH KY Paris: new station is ON THE AIR with Southern Gospel format and USA net news. Programming is LOCALLY produced, not satellite fed!!!
1470 WBUL KY Shepherdsville: silent station is ON THE AIR
1480 OKAN ON Newmarket: silent since last March, station is now ON THE AIR again
1500 KOKY AR Jacksonville: license for this silent station has been CANCELLED and the calls DELETED
WSMX NC Winston-Salem: station was reported to be off by a local monitor but silence must have been very brief as this station is still ON THE AIR
1520 WQMA MS Marks: silent station may be ON THE AIR with a blues format by the time this reaches you
1540 WADM IN Decatur: station is SILENT temporarily due to equipment problems
1550 WNDI IN Sullivan: silent station is ON THE AIR
WVAB VA Virginia Beach: silent station is ON THE AIR
1600 WRNC NC Reidsville: license renewal for this long silent station has been DISMISSED, we assume this indicates this station will not return

THANKS: Dick Truax, Chuck Rader, William Cooley, Doug Smith, Stan Morss, Jack Parks, John Bowker and M Street Journal

73 and Good DX, Jerry & BKF Jerry Starr & Buffalo K. Foorman

610 WIOD
NEWS • TALK RADIO

Domestic DX Digest

North: Bill Hale

495 Creekview Drive - Meridian, ID 83642-3241

South: Duncan Shaw

3131 S. McClintock B111 - Los Angeles, CA 90007

East: Dave Braun

11 Mill Bend Acres - Wyoming, DE 19934-9523



DX Catches in the U. S. and Canada, with 24-hr. ELT

DDXD-North

MEDIUM WAVE RAMPINGS

- Here we are in Idaho! See the header for my new address. Meridian is about 10 miles west of Boise's city center and I'm about six miles due north of KBOI's transmitter site. But have been able to null them out for KNBR-680 reception! Due to the re-alignment of DDXD (see map in Issue 28, although the dot for Boise is about 125 miles too far East, hi), I must sadly say good-bye to all of you faithful reporters in the South and the Northeast. But, keep your fine reports going to your new editors and DDXD will continue to be THE way to get your DX and tips out in the fastest possible manner available to mortal man, hi. Thanks for all your support over the past six months (West-Coasters) and six years [Has it been that long?! Yup] for the East. So, let's go, **Northerners**. Report now . . . and often! Show those DXers in the *other* areas where the *real* DXers live!! The phone number here is 208-888-7398. Call from 6-10 PM Mountain Time.
- Welcome to first-time reporter **Deane McIntyre** of Calgary, Alberta. Good to hear from another "Northerner"! Good stuff, Deane. Report often.
- Thanks to **Mike Brooker** for the handy little CBC Radio Schedule and station guide. From this new location, I'll be doing a lot of listening to that service.
- Included here are the results of **Jerry Coatsworth's** DX Test efforts over the past season. Mighty fine, mighty fine!
- Upcoming deadlines for DDXD-N are as follows: **Issue 30 Sept 12 . . . Issue 1 Sept 26 . . .** and weekly for several issues after that. Have fun at the Convention!



SPECIAL

- 590 WKZO MI Kalamazoo - As of mid-July, format is now News-Talk** (ex:AdCon). Slogan: *News 59*. (PLB-MI)
- 800 CHAB SK Moose Jaw - 7/11 050?** Fair with . . . *You know it, we know it, they know it, and soon everybody will know it. Nobody plays more continuous country than Country 800. Slogans Continuous Country and Country 800 and Saskatchewan's Continuous Country. No longer Oldies. Also now Broadcast News.* (SA-MB)
- 820 WOSU OH Columbus - Beginning 8/1, hours of operation are 0500-2300 Monday - Friday and 0600-2400 Saturday and Sunday** due to budgetary cutbacks. NPR's *Talk of the Nation* will replace big-band programming. Also affected are the schedules of WOSU-TV and WOSU-FM. (GH-OH)
- 360 CJBC ON Toronto - 7/15 0315 Noted OFF for the first time in a long time.** The next night I heard them sign off at 0110. Perhaps an austerity move? (JR-NY)
- 980 KUPI ID Ammon - Idaho Falls - 7/27-8/2** Heard with dual city ID, slogans *98 Gold and Q-Pee*. Playing some satellite feed with local ads. All music *Adult Classics*. My 10 and 13-year-olds were totally amused! Data differs from current Log. (BW-WY)
- 1150 WAVO SC Rock Hill - QSL from WHVN-1240 states they simulcast on WAVO and it's 24 hrs, 1 kw days, 60 watts nites.** (DT-ON)
- 1340 KSGT WY Jackson - 7/27-8/2** Heard all week with all-country music. Good signal all the way north until into Yellowstone. Real weak copy even up at Old Faithful. **No CHR** heard at all as listed in '92 Log. (BW-WY) (Note: **no TIS'** noted at either Grand Teton or Yellowstone)

- 1480 WGVU MI Kentwood - Has added NPR's Fresh Air and John Hackenberry's talk show to their afternoon line-up. Also, has been operating on 1000 watt night pattern 24 hours-a-day since June.** (PLB-MI)
- 1520 WQWQ MI Muskegon Heights - 8/1 Took Back these calls (ex:WWEZ) and adopted a Nostalgia/Big Band format. No longer simulcasting their FM.** (PLB-MI)
- 1550 KQWB ND West Fargo - 7/24 0650 Good with C&W music, KQ Country is KQWB West Fargo - Fargo → Unistar Radio News. No longer Oldies.** (SA-MB)

1240 AM **KODY**

Count on us!

UNIDS AND UNID HELP

- 580 UNID ?? - 8/1 2338** Very poor with *very vocal* preacher, briefly under CKY. Lots of Iowa, Missouri, Indiana & Wisconsin this night. Ideas, please!! (SA-SR)
- 1290 UNID ?? - 8/2 2255** Very poor in brief fade-up with Latin BBD music under CIFX. (SA-SW)
- 1550 UNID ?? - 7/23 0621** Fair with C&W music, several *One double 5 Ob Country* IDs. (SA-MB)

MIDNIGHT TO 0800 HOURS ELT

- 580 CKXR BC Salmon Arm - 7/16 0125** Good with AC music. No sign of usual CKUA or CKY, which normally dominate. (DMc-AB)
- 590 WOW NE Omaha - 7/16 0100** Good with local weather, several IDs. Also uses the *Radio Ranch* non-ID. (DMc-AB)
- 700 KMJY WA Newport - 7/19 0055** Fair → good in CKRD null with C&W music, ID and sign-off at 0100. (DMc-AB)
- 730 KURL MT Billings - 7/16 0100** Good with local weather and ID. No sign of usual CKLG or CKDM. (DMc-AB)
- 850 CKVL PQ Verdun - 7/19 0611** Fair with sports report in FF → *Elys' I Can't Help Falling In Love With You.* (MB-MA)
- 860 WGUL FL Dunedin - 7/15 0330** With MoYL format, ID and weather. Nice to have CJBC off. (JR-NY)
- 990 CKIS PQ Montreal - 7/19 0553** Blasting in with *Oldies 990* ID, ad for *Cape Cod Restaurant* in Ste-Anne-de-Bellevue. (MB-MA)
- 1030 KMAS WA Shelton - 7/13 0200** Fair with ABC News, local weather. IDs as *1030 KMAS*. KTWO off. (DMc-AB)
- 1060 CJRP PQ Quebec City - 7/19 0548-0557** Fair to good with FF *MoR tunes*, noted **! CJTR-1140** Trois Rivières (good), CFVM-1220 Amqui (fair) and CJMS-1280 Montréal (fair to poor). (MB-MA)
- 1100 WYKR VT Wells River - 7/19 0607** Fair with state and local news. (MB-MA)
- 1340 WSTJ VT St. Johnsbury - 7/13 0012** In mess with what sounded like a *local* rock program and . . . *you're going to hear about it on WSTJ* . . . On later than shown in '91 NRC Log schedule. After 16 years, only my 3rd from Vermont. (JR-NY)
- CKCR BC Revelstoke - 7/20 0200** Fair with Broadcast News, sports, ID. (DMc-AB)
- 1360 KSCJ IA Sioux City - 7/16 0658** Good with *KSCJ Information Radio* at **new sign-on time.** (SA-MB)
- KRKK WY Rock Springs - 7/23 0505** Excellent with oldies, ID as *KRKK Rock Springs - Green River.* (DMc-AB)
- 1390 WRSC PA State College - 7/13 0620** Fair with report on a renovation project at *Penn State University.* ID at 0629. (JB-MA)
- 1420 WCED PA Dubois - 7/9 0610** Several IDs, weather report mentioning Dubois. ID also as *Classic 1420.* (JB-MA)
- 1440 WNPV PA Lansdale - 7/13 0611** Fair with IDs as *WNPV* and *Info Radio.* Report called *Suburban Weather Report.* (JB-MA)
- 1450 KIRX MO Kirksville - 7/23 0604** Fair with weather/sports. ID as *KIRX* → C&W music. (SA-MB)

- KBFS SD Belle Fourche** - 7/20 0500 Good with *All day, all night, we're here for you. KBFS Belle Fourche*. Must be 24 hours now? (SA-MB)
- 1460 CKRB PQ St-George-de-Beauce** - 7/19 0601 Fair with FF news and sports. (MB-MA)
- 1470 WXXW PA Allentown** - 7/13 0556 Country music, ID as *1470 Stereo WXXW* at 0600. Fair to poor. (JB-MA)
- 1590 KLLL TX Lubbock** - 7/22 0640 Good with C&W music, local news. *K Triple L* ID. Dominating frequency. (SA-MB)

1600 TO 2400 HOURS ELT

- 680 KFEQ MO St. Joseph** - 8/2 2339 Good with BBD music on *Wax Works* program. *KFEQ* ID. Over/under very rare CJOB. (SA-SR)
- 780 CFDR NS Dartmouth** - 7/18 2145 Good with local weather → *Bryan Adams* song. (MB-MA)
- 790 CIGM ON Sudbury** - 7/18 2200 Fair in fight with several others with *Blue Jays* vs. *Mariners* baseball. (MB-MA)
- 810 KCMO MO Kansas City** - 8/2 2307 Very Strong with ESPN Sports Radio 1 KOIL-1290. Over CKJS. Unreal here. (SA-SR)
- 930 WYFQ NC Charlotte** - 7/7 2306 Good, with end of a newscast, then a religious show. First time with new calls. (JK-VA)
- 950 KLIK MO Jefferson City** - 8/1 2215 Poor with C&W music, local ads for a moving company and a restaurant. New for MO #59. (SA-SR)
- KWAT SD Watertown** - 8/1 2220 Fair with *Minnesota Twins* baseball Roundup, local ads. Under/over CFAM. (SA-SR)
- 1180 WHAM NY Rochester** - 7/9 2143-2300 In poor/fair. with *WHAM's 70th Anniversary Show (July 9, 1922 - July 9, 1992)*. Interesting show, MC'd by *Alan Harris*. Guests included former air personalities *Jack Slattery* "The World's Tallest Midget", *Jack Murphy*, *Bob Meteor*, *Sheila McGrath*, *Jeff Howlett*, *Ann Keith* (now on KMOX), *WHAM-TV* pioneer *Ann Rogers*, *Harry Abraham* (whom NRCers should remember from his early morning *50,000 Watt Jazz Show*, *David A. Senate*, *Beth Adams*, "Mitch" *Miller*, "Foster" *Brooks*, along with others. Heavy Radio Taiño QRM! (JK-VA)
- 1230 WUBE OH Cincinnati** - 7/16 2113-2210 C&W and OLD comb. Hard to read due to three unIDs with talk. Call ID at 2130 into news. Poor. (DT-ON)
- 1240 CJCS ON Stratford** - 7/20 2145-2210 With *OLDies*. 2215 start of bpb of *Blue Jays-Angels* game. QRM from WJTN. (DT-ON)
- 1250 KBRF MN Fergus Falls** - 8/1 2246 Fair with C&W music, *KBRF* ID. In a mess. (SA-SR)
- KIKC MT Forsyth** - 8/1 2251 Poor with C&W music, *KIKC* ID at 2300. Under CHSM. New for MT #43. (SA-SR)
- WEMP WI Milwaukee** - 8/1 2300 Poor with *WEMP, Milwaukee* ID → oldies. (SA-SR)
- 1350 CKDD ON Oshawa** - 6/24 1653 Good with *Good Time Oldies* non-IDs. QSL shows *new call letters*. (JR-NY)
- 1400 WKWK WV Wheeling** - 7/22 2210-2300 With *OLDies*, *You are listening to ??? on WKWK* at 2230. News(?). Very poor under 2 unIDs. (DT-ON)
- 1450 WATZ MI Alpena** - 6/26 2345-2400 With C&W mx, ID at 2400 *1450 WATZ*. Poor, over/under unID. (DT-ON)
- 1460 WGNA NY Albany** - 7/7 2320-2335 With C&W mx, ID at 2333 *107.7 WGNA*. Over/under unID with music. (DT-ON)
- 1490 WOHI OH East Liverpool** - 6/21 2200 Call letter ID through mess, then ABC News. (JR-NY)
- 1530 WWGZ MI Lapeer** - 7/11 2048 *Country Gold* slogan and call letter ID under WCKY. (JR-NY)
- 1550 WXVA WV Charles Town** - 7/14 1954-2000 With *OLD* and *We are the station that plays all the oldies, WXVA 1550*. News(?) at 2000. Poor with splash from CHIN-1540. No CBE. (DT-ON)
- 1560 WFSP WV Kingwood** - 7/7 2056 In good, with WQXR QRM, and SSB signoff. On 250 watts Critical Hours. (JK-VA)
- 1570 WTLK NC Taylorsville** - 7/7 2105 In with *The best music and most variety, 1570 WTLK* → country/western music. On 500 watts Critical Hours. (JK-VA)

- 1590 WCZN PA Chester** - 7/11 2026 In WAKR null with *Your Country Cousin*, *WCZN* ID and C&W music. Previously heard as *WQIQ*. (JR-NY)
- 1600 WRCC GA Warner-Robins** - 6/24 2221-2310 With *ROK* music and *We are back, on Rock 102* with female annr. NBC News at 2300 followed by local news and ad for used cars, then sports. Under *CKNR/WWRL/WAAM/WUNR* at various times, taking turns! (DT-ON)

DX TEST RESULTS '91-'92



Jerry "The Pirate" Coatsworth Merlin, ON

JRC NRD-525 + 30' antenna, CTR-73 taper and programmable timer

(in chronological order)

- 1370 KCRV MO Carathersville** - 10/28/91 0615 Listened via tape - nothing heard. Found out later test was not aired or aired at different time.
- 1560 KKID OK Sallisaw** - 11/11/91 Listened from 0120-0135. Heard several code IDs and faint voice ID. Sent report, but no response received.
- 1320 KXOL OK Clinton** - 11/25/91 0130-0200 Nothing heard.
- 1360 WGEE WI Green Bay** - 12/2/91 0200-0300 Voice and code IDs heard easily, mixing with WSAI. Verie in 51 days signed by *Steve Konopka*, Chief Operator.
- 1410 WDOV DE Dover** - 12/16/91 0200-0205 Heard rapid code at 0204. Received full data card in 15 days signed by *Robert L. Reinhardt* who said *Dave Schmidt doesn't work here anymore*.
- 1590 WARV RI Warwick** - 12/23/91 0330-0430 Heard several faint code and voice IDs. Verie letter and bumper sticker in 14 days. V/L signed by *Lincoln Hubbard* - *NIATU*.
- 1320 WCVR VT Randolph** - 12/30/91 0045-0102 Heard only *WBOL* and *CJMR*.
- 1150 WDEL DE Wilmington** - 12/30/91 0330-0400 Listened via tape. Heard rapid code just before 0400. Sent report. Received nice non-verie reply from *Bill Blatz* (CE) in 29 days. Said no code used during test.
- 560 WGAN ME Portland** - 12/31/91 0030-0200 Nothing of test heard, but did hear unID with *Larry King* and unID from Newfoundland.
- 1570 KMYZ OK Tulsa** - 1/6/92 0101-0500 Heard code IDs and *Yankee Doodle* several times. Received sticker and verie letter signed by *Joe Hancock*, CE in 27 days.
- 720 KUAI HI Elele** - 1/12/92 0500-0900 Highlight of the DX Test season. Was on the phone with *Chuck Reh* during the entire hour (0500-0600) while *WGN* was silent. Chuck's R-390 snagged some code with help from his loop by nulling local *CHYR*-730. All I got was *CHYR* slop! [Hmmm. DXing by telephone? - Ed.]
- 1320 KXOL OK Clinton** - 1/13/92 0130-0200 Taped this test - nothing heard. I did hear a bet from a station while setting up on 1317.5.
- 1570 WQTW PA Latrobe** - 1/18/92 0100-0030 Heard tones and possible code ID. Verie letter in 20 days signed by *Joey Kaye*, Chief Engineer.
- 1510 WJIC NJ Salem** - 1/20/92 0000-0030 Easily heard with variety of tones. Verie letter in 10 days signed by *Ben Ferguson*, VP & CE.
- 720 WWII PA Shiremanstown** - 1/26/92 0330-0400 Heard music, code voice ID all part of test. Verie letter in 49 days signed by *Carl C. Kuehn II*, CE.
- 1350 WDIO MN Ortonville** - 1/27/92 0100-0110 Nothing heard.
- 1250 WMTR NY Cedar Knolls** - 1/27/92 Too tired to attempt this test so set taper for *WSKE* test later same night.
- 1040 WSKE PA Everett** - 1/27/92 0200-0300 Taped this one and heard code ID and fiddle music. QSL card in 12 days with no signature.
- 880 KHAC AZ Window Rock** - 2/3/92 0300-0400 Listened via tape. Heard faint code. Verie letter in 17 days signed by *Bill Hume*, CE. Said station is actually in New Mexico, but P.O. Box is in Arizona.
- 630 WVVW WV St. Marys** - 2/10/92 0000-0030 Checked this one just for fun while waiting for *WZZZ* test, but heard only local *CFCO*.
- 1300 WZZZ NY Fulton** - 2/10/92 0115-0200 Only heard *Best of King* on *WERE* and C&W unID'er under.
- 610 KONA WA Tri-Cities** - 2/10/92 0330-0400 Heard nothing of test. Only *WTVN* and possibly *WDAF* and *WZZX*.
- 1370 KCRV MO Carathersville** - 2/17/92 0615-0645 Easily heard tones and code ID.

- 8
690 KUSD SD Vermillion - 2/17/92 0300-0330 Taped this one using timer, but forgot to connect taper to radio, so . . . nothing heard.
- 1310 WJLK NJ Asbury Park - 2/24/92 Since time wasn't mentioned (in Test Notice) I listened for a few minutes after midnight but heard nothing.
- 1250 KTMA SC Charleston - 2/24/92 0300-0330 Heard code ID very well and received verie letter in 67 days signed by Bruce Roberts, CE.
- 900 KALT TX Atlanta - 3/7 92 0600-0630 Heard nothing of test, but did hear CHML and WFRO sign-on at 0602.
- 1530 KPCR MO Bowling Green - 3/8/92 Positive copy heard from 0130-0152. Good ole boy-style announcer giving station location, transmitter info, mention of Wayne Heinen. Also code and voice IDs. Verie letter in 10 days signed by L. Paul Salois, founder, president, general manager and CE.

REPORTERS

- JB-MA Jim Bagge Springfield, MA; HQ-140X and 350' Loop
- GH-OH Gregory Henson Circleville, OH;
- JR-NY Jim Renfrew Rochester, NY; HQ-180 + Radio West Loop
- JK-VA Jeff Kitz Dillwyn, VA;
- MB-MA Mike Brooker Toronto, ON (DXing at Lenox, MA); ICF-7600D
- DT-ON Don Trelford Scarborough, ON;
- SA-xx Shawn Axelrod Winnipeg, MB; ICOM R-70 w/PLAM board & 4 kHz filter + 4' Box Loop/100' longwire . . . or on a 5 1/2 hour ride to Swan River, MB; '85 Plymouth caradio w/whip (Finally. Original reports to me, Shawn!!)
- BW-WY Bruce Winkelman Tulsa, OK (DXing at Grand Teton and Yellowstone National Parks); rented 4WD vehicle radio
- PLB-MI Phil Boersma Spring Lake, MI;
- DMc-AB Deane McIntyre Calgary, AB; Sony AM "Super Sensitive" TRF portable, circa 1970
- Ed.-CA Editor, N5SZC7 Meridian, ID;



GRAVEYARD DISTANCE RECORD UPDATE

1230 kHz:			
WFOM NC	Marietta	J.W. Bay, Jr.	Drexel Hill, PA 661
WECK NY	Buffalo	Don Trelford	Scarborough, ON 57
WISP NC	Kinston	J.W. Bay, Jr.	Drexel Hill 352
1450 kHz:			
WGNS	Murfreesboro	Don Trelford	Scarborough 654
1490 kHz:			
WDLC	Port Jervis	Don Trelford	Scarborough, ON 286

ABBREVIATIONS AND SPECIAL SYMBOLS USED IN DDxD-NORTH

|| :parallel with or to - :into :00: on the hour AC:Adult contemporary AP:Associated Press BBD:big band
BRN:Business Radio Net C&W:country & western CHR:contemporary hit radio CID:code ID CL:call letter
ContChr:contemporary Christian EZL:easy listening EE:English FF:French GOS:gospel IRN:Interstate Radio
Net LSR:local sunrise LSS:local sunset MLB:Major League Baseball NBA:National Basketball Assn
NPR:National Public Radio OC:open carrier pbp:play-by-play POL:political PSRA:pre-sunrise authority
PSSA:post-sunset authority QRM:man-made interference QRN:natural interference QTH:location REL:religious
ROK:rock 'n' roll RS:regular schedule \$stereo SID:singing ID SRS:sunrise skip SS:Spanish SSB:Star Spangled
Banner SSS:sunset skip TC:time check TT:test tones UC:urban contemporary UPI:United Press International

73,

Bill

Need more information about AM DX'ing?

Mail a 29¢ stamp to NRC Publications - P. O. Box 164 -
Mannsville, NY 13661-0164, and ask for the NRC Product Catalog.

DDxD-South

SPECIAL

- 690 KSTL MO St. Louis - Now carries children's programming in the early afternoons. (EB-MO)
- 1260 WIBV IL Belleville - Per announcement on KTVI Channel 2, this station simulcasts KTVI's newscast at 1800 ELT. (EB-MO)
- 1400 KJCF MO Festus-Chrysal City - Now AC, ex-OLD (EB-MO)
- 1570 KBGZ IL Alton - Now carries SUN Network Talk, still *The Big Z* (EB-MO)

TIS

- 530 MO St. Charles - 8/7 0021 good over CIAO and other TIS with info on resurfacing of the Poplar Street Bridge, mentioning alternate routes. There is also a synchronous transmitter in downtown St. Louis with a one-second delay.

0000 - 0800 ELT

- 640 WWLS OK Moore - 8/7 0143 good over KFI/WOI/WCRV with KXOK-630 splash with baseball talk. (EB-MO)
- WCRV TN Collierville - 8/7 0144 fair under WWLS with KXOK-630 splash with mention of *on WCRV* and christian information. (EB-MO)
- 1140 WRVA VA Richmond - 8/1 0301 good over XEMR with slight KMOX-1120 splash with CBS News, network ads, wx for Richmond, into *Big Al's Bluegrass Special*. Better here than in GA! (EB-MO)
- 1210 WOGL PA Philadelphia - 8/1 0310 good with fair \$(tereo) with OLD, *Oldies 98* ID, mention of a *Twin Spin Weekend*, *Oldies 98* jingle, better here than in GA. (EB-MO)
- 1430 WXAM KY Buffalo - 8/7 1058 good to poor in super-tight WRTH null with CWM, faded out by legal ID time. (EB-MO)

0800 - 1600 ELT

(What - everyone was too busy to DX while at work? - DJS)

1600 - 2400 ELT

- 860 KKOW KS Pittsburg - 7/28 2109 near local-like with some KFUD-850 splash w/CWM. (EB-MO)
- 1130 KFAN MN St. Paul - 7/31 2158-2206 Legal ID, mention of sports format, into Mutual Nx, then to Saturday sports program. Very strong even barefoot and rare enough here; best ever. (JL-MO)
- 1310 WIBA WI Madison - 7/31 2058-2100 ad for hardware store, Legal ID, into Nx. Strong. Caught while looking for Joplin o/u other unID station. (JL*MO)
- 1440 WROK IL Rockford - 7/28 2105 good over WHHY and others with slight WRTH-1430 splash. Wx, *Sounds of Sinatra* promo, Jobs Corps PSA, jingle, into *Bruce Williams Show*. (EB-MO)



REPORTERS

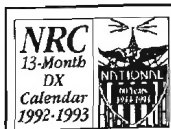
- (EB-MO) Eric Bueneman Hazelwood, MO; DX-200, STA-90, TM-152, SM-2)
- (JL-MO) Jefferson E. Lewis Kansas City, MO; Grundig Satellit 400; RW Shotgun // Selec-A-Tenna and barefoot. (JL*MO) Panasonic RQ-V180

BITS AND PIECES

Eric Bueneman reports: "Back in the St. Louis area after four years near Atlanta, and my closest local, KIRL-1460, can be nulled to get traces of KGGO, but I can still get a nice signal on WMBD-1470 and the mess on 1450."

A short first column for all you Southern people - in fact, this was the completely Missouri edition!!! Remember, please send reports to the new L.A. address above. Hope to see you in a few days in THE BIG O!!!

The NRC 13-month DX Calendar - you gotta have it!



No, we couldn't get Cindy Crawford to pose for it, but we did give you an extra month - it runs from October through October - and sunrise-sunset maps for each month, plus much more information. Only \$4.00, from NRC Publications. NY residents, please add sales tax.

DDXD-East

NEWS VIEWS AND COMMENTS

Since we are in the middle of summer, and there has not been too much DX activity here lately, I thought that I would start this first column by introducing myself to the membership. I have been a member since 1982, contributing occasionally as DX and time allowed. Due to the timing of Paul's request for volunteers, I found myself with the time and desire to put something back into the club. I hope it works out for all of us.

I am involved in both Prodigy and CompuServe, and would be glad to get notes and comments through either service, but please do not send loggings for the column that way. I can make no guarantees that messages will be received on a timely basis if things start to get busy.

After looking at the publishing schedule I am going to plan on having deadlines here on the Saturday before Paul's deadline. If that starts to run into trouble with mail service, I will let you know. The next deadline will be September 12.

If you have looked closely at the new divisions for DDXD, you will notice that the new DDXD-E is the smallest of the divisions. The reason for that is that it is also the area which produces the most loggings for the club! Please keep my fingers busy through the entire year with your DX, and this column will be the largest for tips from the smallest area!

Let's move on to the tips that have been received...Thanks Jeff!

SPECIAL

- 640 WWJZ NJ Mount Holly - 7/31 1330 Heard testing very loud while traveling north of Philly. EZL music and announcements. (Ed)
- 1520 WHRF MD Bel Air - 8/15 1500 Back on the air, had talk show with local government employee talking about recycling and other local programs. I don't know how long it has been back. I thought I saw it reported somewhere, but this is the first time heard since it was silent. (Ed-DE)

0000 to 1800 ELT

- 950 WROL MA Boston - 7/26 0002-0011 In faint but clear, with Spanish programming before signoff. At 0002 heard what sounded like "...Radio Unidad de...". Heard WROL calls during signoff, which was very, very weak. No sign of usual WQBE or WPEN. Is this WROL or WRUL, which I believe used to be a shortwave station? Still 90 watts? Prepared QSL request letter sent. (JK-VA)

1600 TO 2400 ELT

- 920 CJCH NS Halifax - 7/23 2257-2300 Poor, with what sounded like a combination of easy jazz, oldies, mixing with CFLS/WTTM. At 2258, very clearly heard a "CJ-CH" jingle. Nova Scotia number 1 at this location! (JK-VA)
- 1380 WTOB NC Winston-Salem - 7/22 2134 In very good, with Atlanta Braves baseball vs. St. Louis, with WTOB mentions during the breaks, and Sherwin-Williams, American Express, Bel Aire Used Car Rentals and Dennys Restaurant commercials. (JK-VA)

PIRATES

- 1620 WRMR NY Monticello - 7/22 2245+ In good over heavy TVI with mentions of Monticello, NY and 914-434-2587 phone number given out, along with music by the Eagles (Take it to the Limit) and the Rolling Stones. Also obscene talk. (JK-VA)

REPORTERS

- JK-VA Jeff Kitze Dillwyn, VA Sony FD-555 TV/AM/FM Cassette 100% barefoot
- Ed-DE Dave Braun Wyoming, DE R-2000, Palomar Loop



New from NRC's DX Audio Service:

"After Dark #2"

Four C-90 tapes in a holder now available for only \$9.50 postpaid. Listen to accounts about the VOA ... news about radio today ... 45 minutes from WNRC, and more airchecks from special stations ... and many special features. Order from NRC Publications - Box 164 - Mannsville, NY 13661. NY orders, please add sales tax.

International DX Digest

Foreign DX Catches. Times are UTC; for ELT, subtract 5 hrs.

Jim Renfrew

61 Wilcox Street
Rochester, NY 14607-3832

The big news here is that I finally got Vermont verified (yes, the next state over!), WSTJ 1340. This is only the third one I've heard in 16 years from Rochester. I've heard more from Spain than Vermont! Congratulations to DX Australia, which celebrated its 10th anniversary in July.

A reminder that the IDXD deadline is one week before the Topeka deadline. Try to get it to me on Friday.

TRANS-ATLANTIC

- 549 ALGERIA Oran/Les Trembles 6/11 0345 - Bits of Arabic chant, mostly just a loud het on 550 domestics. [MC-MA]
- 639 SPAIN La Coruna 7/27 0350 - Het, bits of Spanish talk. [MC-MA]
- 855 SPAIN Murcia et al. 7/27 0347 - Spanish talk, music, in WHDH slop. [MC-MA]
- 882 ENGLAND Washford 7/27 0344 - Surprisingly loud with English talk, rock music. This shows that, at least when dry "summer polar air" is in (and thus a little QRN), the new TA DX season can start in late July in the northeastern US. [MC-MA]
- 891 ALGERIA Algiers 6/5 0358 - Arabic string music and vocals to good peaks. 6/11 0338 - Arabic music, good. 7/1 0338 - Fair with Arabic male vocal chant. [MC-MA]
- 1035 PORTUGAL Lisboa 7/27 0338 - Pop music, Portuguese talk, fair with WBZ null. [MC-MA]
- 1305 UNID (probably Spain) 7/27 0321 - Growl of many co-channel carriers, not much audio discernable. [MC-MA]
- 1521 SAUDI ARABIA Duba 7/27 0350 - Arabic acapella vocal (Koran), pushing past WWKB. This has been good in other years during the late summer. Dawn enhancement near the transmitter site may be involved. [MC-MA]
- 1530 VATICAN 7/27 0318 - Chimes, then Vaticana mention and Slavic-sounding talk including a mention of Sarajevo. Often atop WCKY. This, like 1521, is often good in late July and in August. [MC-MA]
- 1539 GERMANY Mainflingen 7/27 0314 - Bits of German in bad WPTR slop. [MC-MA]
- 1548 UNID 7/27 0313 - Arabic or Hindi-sounding music, in slop. Maybe an ethnic program on a UK local. [MC-MA]
- 1575 SPAIN/PORTUGAL/??? 7/14 0400 -

A real jumble here, pips, Spanish talk (poor), QRMed by apparent Portuguese and another audio that might have been German. [MC-MA]

- 1584 SPAIN 5/27 0412 - Good with man in Spanish. 7/1 0415 - excited Spanish talk, fair. 7/14 0402 - Good with news by man in Spanish. [MC-MA]
- 1593 GERMANY Langenberg 7/14 0403 - Poor with German talk. 7/27 0303 - Good with woman in German, then light music. [MC-MA]
- 1602 SPAIN 7/14 0406 - Spanish talk, poor in WUNR/WWRL slop. [MC-MA]
- 1611 VATICAN 7/27 0307 - Poor with religious choir music, hetted by Anguilla 1610. [MC-MA]

ZYI - 894



OM 1.510 - KHZ

RÁDIO FLORIANO LTDA.

Rua Clementino Ribeiro, 56 - 2o. Andar C. P. 30
Telefones 522-2441/522-1207 - Telegrafia DIFUSORA
CEP 641800 - Floriano - Piauí

PAN-AMERICAN

- 750 NICARAGUA R. Sandino, Managua - Back on (assuming they were off recently) with calls YNRS (at least that's what it sounded like) mentioned at their midnight (0500) sign off, and now called "La S Grande". [CD-FL] (WRTH says calls are YNARS - Jim)
- 780 VENEZUELA R. Coro 7/16 0445 - Strong in WBBM null with slogan and time check between musical selections. [JR-NY]
- 1020 VENEZUELA Mundial Margarita 7/15 0745 - Heard with "Mundial" ID after music; weak in KDKA null. [JR-NY]
- 1375 ST. PIERRE ET MIQUELON 7/1 0350 - Good with female opera vocal, then French talk by man. [MC-MA]

STATION NEWS

- ALBANIA: Durrës 1098 has been off its regular frequency 1089 for several weeks. [Horst Rauch via BE in ARC #2]
- AMERICAN SAMOA: WVUV Pago Pago back on 648 after the cyclone last December. [R. Nederland Media Network in WDXC 7/92]
- ANTIGUA: VOA is off the air. A Finnish DXer, Lauri Levanto, has visited the island and heard this info from a former technician of the station. [SDXL in ARC #2]

AUSTRALIA: 3EE signed on the air 7/3. 200 1575 to leave AM for FM on July 22. 2WL 1314 to leave for FM on August 1. 2NX 1341 left the air on June 27th. 4AVA Gold Coast has closed down, apparently during 1991. The station had been broadcasting on 1656 kHz. [DX Australia 7/92]

COLOMBIA: Stations observed off frequency: 1333 Caracol Popayán, 1372.9 RCN Cauca, 1433 La Voz de Belalcázar. [YHG in PDX in ARC #2]

DOMINICAN REPUBLIC: HITS Radio Enriquillo was ordered on 2/14/92 by the government to stop airing Creole news reports. The news program "Nouvelles d'Haiti" began broadcasting a few days after the coup d'état in Haiti in 1991. To get around restrictions, R. Enriquillo staff have begun to sing news reports and communiques. [IRCA in ARC #2]

GERMANY: R. Volga, serving the remaining units of what was the Soviet Army, is now hiring out air time to other stations. Since 1st May, the German satellite news station Radioropa-Info has been using the 200 kW transmitter located at Burg; it is broadcasting in German on 261 kHz, Mon-Sat 0500-0700, 1000-1200 and 1400-1600, Sun 1300-1600 and 1800-2100. A 90 minute program from Radio Volga itself is broadcast 1130-1300 Sundays. [R. Nederland Media Network via Communication #211] RIAS 999 has now added a transmitter in Schwerin, power 50-100 kW. [BE in ARC #2]

ITU: The following states are now official members of the International Telecommunication Union (ITU): Armenia (ARM), Azerbaijan (AZE), Belarus (BLR), Estonia (EST), Georgia (GEO), Kazakhstan (KAZ), Kirghizia (KGZ), Latvia (LVA), Lithuania (LTU), Moldova (MDA), Russia (RUS), Tadzhikistan (TJK), Turkmenistan (TKM), Ukraine (UKR), and Uzbekistan (UZB). The Republic of Croatia (HRB) and Slovenia (SVN) are also now members. Abbreviations are the official ITU country codes. [ITU and Benelux DX Club in WDXC 7/92]

KALININGRAD: A WRTH collaborator in St. Petersburg has been able to obtain power figures for the transmitter at the Bolsakovo site: 171 1200 kW, 1143 150 kW, 1215 1200 kW, 1386 2500 kW. The figure for 1386 could be ERP, though all other figures appear to be transmitter outputs.

MEXICO: XENO 640 La Voz de la Proviencia 10/5 kW, ex 1580. Also, the Commission on Radio and TV is now selling the government owned TV stations and will soon sell government owned AM and FM stations as well. According to a constitutional amendment last December, "the church has the right of access to the media of communication". This means religious radio is not far off. [IRCA in ARC #2] (The Mexican Revolution restricted and/or removed many church privileges - Jim)

RUSSIA: A WRTH collaborator in St. Petersburg has been able to obtain power figures for these transmitters: Popovka (near Krasnyi, southeast of St. P.): 234 1000 kW, 549 1000 kW, 801 1000 kW and 1494 1200 kW; Olgino (northwest of St. P.) 198, 873 and 1125 150 kW each.

SPAIN: RNE R5 Murcia 567 now 50 kW. [Horst Rauch via Play DX-699 in ARC #2]

UNITED KINGDOM: Independent Music Radio, London has been testing with pop music and announcements every 30 minutes on 1215 kHz, regular programs to begin in 1993. 1197 will also be used. [BE in ARC #2]

HELP FROM SWEDEN

Concerning Jean Burnell's recent loggings on 1431 and 1386, from Olle Alm: The only possible CIS station for 1431 is Mikolayiv, Ukraine, which is parallel 4940. Has Kiyev 3rd Program to 0000 summer UTC, then Majak program // 1449. (Horst Rauch via BE via ARC #2 notes that VOA programs in Ukrainian are heard here 2000-2100 - Jim). Radio Ala 1386 recently noted from 0200 via Bolsakovo site in Kaliningrad (2500 kW). Greece opens before 0300 only on Monday mornings. Times are summer UTC. Olle, who is a member of NRC and Arctic Radio Club, also notes that the Scandanavian totals recently printed here in IDXD are for stations verified - even more impressive! Thanks, Olle.

CONTRIBUTORS

[JR-NY] Jim Renfrew, Rochester NY; HQ-180, Radio West loop.

[CD-FL] Chris Dunn, Pembroke Pines FL

[MC-MA] Mark Connelly WAILION, Billerica MA; Drake R8, Realistic DX-440, two 20 meter wires in noise-reducing configuration, phased with MWDX-5, RTL-1A Loop, MWT-2 Tuner also used.



RADIO SANGA
2500 kHz. 1000 W. 1000 W. 1000 W.

Jim

Dangerfield Abroad

Here follows a report from Ben Dangerfield's most recent trip to Morocco and Southern Spain. In additional to observations about specific stations, Ben notes that "a great many stations over there are somewhat directional judging from the 2-tower set-ups I saw." He also reports that "it is quite interesting listening between synchros. You get an echoing, fluttery effect", and that there are few stations north of France audible at night. He noted no TA hets during this visit.

540 MOROCCO, Sidi Bennour - located just north west of Marrakech, and is strong up into Spain day and night.

549 ALGERIA, Les Trembles - semi-local at Torremolinos (where we spent a week, just west of Málaga).

594 MOROCCO, Oujda - strong at Fes, Morocco and Torremolinos, Spain.

603 SPAIN, Sevilla, RNE-5 - Strong days at Rabat, Morocco and at Málaga.

612 MOROCCO, Sebaa-Aioun, R. Mediterranee Int. - FF and AA, seems to be directional between Fes and Tangier. The only MW station on now for R. Med, also heard near Málaga.

684 SPAIN, Sevilla RNE - this powerhouse heard everywhere in this area from Rabat to Malaga. The transmitter is on a hill just west of the city. Surprisingly at night they are sometimes covered by Belgrade, Yugoslavia at Torremolinos.

702 MOROCCO, Sebaa-Aioun - the towers are west of Fes, near Meknes. I saw the complex which is used by 612, 702 and 1044. Directional. This is a Berber language and music station and apparently changes patterns at night. At Fes it sounds local in the afternoon, but far away in the evening.

792 SPAIN, Sevilla SER - strong days at Rabat and Málaga.

828 MOROCCO, Oujda - SS and FF, strong at Fes and Torremolinos.

936 MOROCCO, Agadir - this one's a puzzle. I didn't hear it anywhere in Morocco, nor did I hear it last year from Madeira.

891 & 981 ALGERIA - heard days with weak signals at Torremolinos.

1008 SPAIN, Granada, RNE-5 - that's who's hear now. Fair at Torremolinos. Malaga now on 1152. (Jean Burnell, take note!)

1044 MOROCCO, Sebaa-Aioun - strong at Fes, being local, and fair at Torremolinos. Seems directional east-west.

1052 MOROCCO, Tangier - Strong along the Moroccan coast and pretty good at Torremolinos. I saw 2 towers on the coast which looked to be north-south. Nearby is the VOA complex.

1152 SPAIN, Malaga, RNE-5 - now here from 1008. A synchro now. Has changed places with Málaga.

1233 MOROCCO, Tangier - not on the air anymore. I saw two towers in the city.

1349 MAURETANIA, Nouakchott - tremendous signal at night in Rabat.

1458 GIBRALTAR - I logged this one from the ferry coming into Algeciras which is across the harbor from Gibraltar. I visited Gibraltar a few days later and I think I spotted the towers atop the rock. There is no signal from this station in Torremolinos, perhaps because the town of Gibraltar is on the west side of the Rock and Torremolinos is 100 miles east. However I did log this one at both Sevilla and Rabat, so it must be quite directional. Lots of rock music (no pun intended!).

1485 SPAIN, Cádiz - was atop the frequency in the daytime at Rabat even with a Casablanca station only 60 miles south on the same frequency. Speaking of Casablanca, we visited Rick's American Cafe! It's located in the Hyatt Regency.

1566 MALTA - very strong nights in AA at Torremolinos.

Are you expiring?

We hope not! To avoid expiration, mail your remittance to the DX News Membership Center early. Allow at least three weeks after mailing your check or money order for new renewal data to appear on your DXN mail label.

NRC Coffee Mug

Nine-ounce size ... white glass ... with NRC emblem printed in black on both sides. It's oven-proof and microwavable. Makes a great gift. \$5 to U. S. addresses, \$5.75 to Canada. Order from NRC Publications. (NY residents, add sales tax).



FM DX

Digest

DX on the FM band, from April through September

Hello again, everyone. It looks like the E-skip has died for the time being, as I haven't heard about any since late June/early July. Even 6m (50 MHz) has been dead.

I got in on some of the tropo that Mike Hawk had such a bonanza with, but I had some prior engagements that kept me away from the radios more than I would have liked.

Paul's next deadline is 18 September, and I would like to ask that your loggings arrive in Silver Lake by Wednesday the 16th. This will be the last edition for 1992, so any loggings received after then will be old and decrepit by next April when the column will resume.

73 until next time around.

Eric Bueneman, 631 Coachway Lane, Hazelwood, MO 63042

Equipment: Realistic STA-90 AM/FM/FMS receiver with amplified rabbit ears.

8.3.92 groundwave

1200 89.5 KCFV MO Ferguson- very good with legal ID into New Wave, 'The Wave of the Future' slogans. First day back after two-month hiatus, hours are 0600- 2400 CLT Mon-Fri, 0800-2400 Sat and Sun.

8.6.92 Tropo

1730 95.9 WCNL IL Carlinville- good with SMN CWM, 'Macopin County's Very Own' slogan, mention of CL's in local ad. Follow up to reception of WRVI-96.7 on 95.9 7.9.92: WRVI is the flagship station for the Springfield Cardinals of the Class A Midwest League, and WCNL is the Carlinville affiliate (affiliated with the St. Louis Cardinals).

FORMAT CHANGE:

89.7 KYMC Ballwin, MO- Is slowly phasing out New Wave in favor of "family-oriented programming". Don't know whether it would be religious programming or something more commercialized. Several program directors and DJ's were fired from the station because the programming that was aired wasn't up to the standards of KYMC's owners, the YMCA of West St. Louis County, MO. (Thanks for the enclosed article, Eric. Photocopies as a rule don't print well. -trb)

I might as well give you the combined final

KEZS-FM103

Todd Brandenburg, KA0KAN

9720 NW 31st

Silver Lake, KS 66539-9403

totals from Woodstock and Marietta, GA. Total heard was 155, with 11 verified from 26 states and two Mexican Estados, but no Canadian provinces. I'll do better with E-skip from Canada here. I had four of them (PQ, ON, MB and SK) heard at the old QTH. Also heard from GA was Mexico's Distrito Federal.

In addition to carrying Springfield Cardinals baseball, WCNL-95.9 simulcasts some programming from WRVI-96.7, but carries SMN CWM otherwise. Former St. Louis 'shock jock' J.C. Corcoran (ex-KSHE-94.7 & KSD-93.7) is now on television, working for KMOV-TV 4. 73, KDXOSTL.

Mike Hawk N00SY, 10212 P St., Omaha, NE 68127

Equipment: Kenwood KT-815 w/ 4- 150 kHz filters, FM-10 at 30 ft, R.S. rabbit ears for phasing.

Although E-skip was terrible again, tropo was great. 30 stations were heard at distances over 400 miles! KEEY could be heard with just a 1 foot piece of coax connected! 99 new stations were heard over the 5 days.

8.7.92 Tropo

1100	97.5	KQSK	NE Chadron- country
1104	102.1	KPNY	NE Alliance- rock
1110	88.1	KRSD	SD Sioux Falls- Public Radio
2220	91.9	KQSD	SD Lowry- SD Public Radio
2225	91.1	KTSD	SD Reliance- // 91.9 above
2226	92.9	KSDR	SD Watertown- KS-93
2227	94.5	KPLO	SD Reliance- country
2237	88.9	KNSR	MN Collegeville
2239	90.9	KDSD	SD Pierpont- // 91.1 and 91.9
2245	102.5	KZSD	SD Martin- // 90.9, 91.1 & 91.9

8.8.92 Tropo

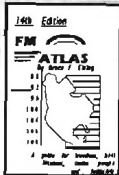
0013	91.5	KRNE	NE Merriman- Nebraska Public Radio
0027	92.1	KGTR	SD Huron- weak ID, NOT on 99.1
0100	88.9	KMPR	ND Minot- sign off of Prairie Public Radio, new state
0100	89.9	KDPR	ND Dickinson- sign off
0114	92.7	KGFX	SD Pierre- rock, KG-93
0124	91.3	KRSU	MN Appleton
0134	106.1	KQLX	ND Lisbon- country, in over 18 hours straight!

0157	105.3	KZMC	NE McCool- rock, over KGFE	1340	102.9	WLTE	MN Minneapolis- Light FM
0200	90.5	KGAC	MN St. Peter- APR & ID	1401	95.5	KSTP	MN St. Paul- ID
0204	89.1	KAUR	SD Sioux Falls- rock	1427	99.5	KOLY	SD Mobridge- country
0213	105.5	KMGH	MN Montevideo- oldies	1543	107.5	WJOD	IL Galena- country
0218	102.1	KEEY	MN St. Paul- country, in over 20 hours straight!	1617	94.3	WPRE	WI Prairie du Chien- Brewers vs. Twins baseball
0253	106.3	KVHT	SD Vermillion- "Hot 106.3 Vermillion, Yankton, Sioux City"	1629	105.1	WOJO	IL Evanston- in Spanish
	0328	107.1	KGWB ND Wahpeton- SNN news/ID. Not on 106.9 yet	1737	96.9	KDLO	SD Watertown- country
0400	89.5	KWGS	OK Tulsa- BBC news	1750	102.5	KQIC	MN Wilmar- Q-102
0401	89.7	KMSU	MN Mankato- Maverick net	1807	88.7	WRFW	WI River Falls- rock
	0724	105.1	KLTA MN Breckinridge	1824	102.3	KCZQ	IA Cresco- Super C
	0727	96.7	KKSJ MN Sartell- Star 96.7	2010	107.5	WCCN	WI Nielsville- Classic Rock 107.5
	0731	99.7	KKCK MN Marshall- rock, ID	2019	100.5	WYMG	IL Jacksonville
	0734	102.5	KDVL ND Devils Lake	2020	99.1	WIAI	IL Danville- country
	0743	107.5	KLIZ MN Brainerd	2029	102.3	WTAZ	IL Morton- Talk Radio 102
	0753	94.9	KQAA SD Aberdeen- Cool 95	2041	102.5	KKUZ	MO Joplin- rock
	0816	102.9	KBWS SD Sisseton- country	2043	107.5	WZZQ	IN Terre Haute- rock
	0823	96.7	KDOG MN Mankato, rock	2109	96.7	KWWK	MN Rochester- country, hasn't changed freq. yet.
	0825	95.9	KILR IA Estherville- old rock	2145	97.5	WZOK	IL Rockford- 97-ZOK
	0839	92.1	KOWO MN Waseca- ID	2204	96.3	KHLS	AR Blytheville- ID
	0841	98.1	WWJO MN St. Cloud- 98 Country	2205	96.3	KRJY	MO St. Louis- Juke Box 96
	0900	105.5	KIWA IA Sheldon	2216	100.5	KGMV	MO Aurora- My Country
	1045	97.5	KDKK MN Park Rapids	2242	102.1	WDNL	IL Danville
	1054	92.1	KLQP MN Madison, CNN news	2301	91.9	WSSU	IL Springfield
	1100	91.9	KDSU ND Fargo- jazz	2302	89.1	WGLT	IL Normal
	1101	91.3	KMHA ND New Town	2306	100.9	WQFL	IL Rockford- cont chr.
	1103	97.9	KFNW ND Fargo- gos	2308	107.5	WGCI	IL Chicago
	1121	107.5	KJKJ ND Grand Forks- "The Valley's Rock 108"	2315	100.1	KJMO	MO Jefferson City- FM-100
	1146	96.5	KJJK MN Fergus Falls- The New KJ-96	2344	96.7	WIHN	IL Normal- Oldies 96.7
	1148	95.7	KKOK MN Morris	2353	102.7	KYTC	IA Northwood- KY-102.7 (.7 ?! -trb). KFRX of air for maintenance until 0300
	1157	99.5	KSJN MN Minneapolis- cla	8.9.92 Tropo			
	1209	93.5	KSCR MN Benson- ID	0002	102.7	WJEQ	IL Macomb- Classic 103
	1211	92.5	KQRS MN Golden Valley- KQ-92	0025	102.7	WVAZ	IL Oak Park- V-103
	1215	101.3	KDWB MN Richfield- rock, ID	0027	105.5	WMMM	WI Verona
	1216	97.1	KTCZ MN Minneapolis- STRONG (into KS also- trb)	0029	106.1	WJXQ	MI Jackson- Q-106
	1233	104.1	KJJO MN St. Louis Park- KJ-104	0030	105.5	WDND	IL Wilmington
	1234	98.3	KVMU? IA Emmetsburg- calls sounded like KVMU, but couldn't find any record of them changing from KEMB. (neither could I- trb)	0031	98.9	WVCX	IL Tomah
	1238	95.9	KQCL MN Faribault- Power 96	0033	98.3	KQYB	MN Spring Grove- 'KQ Hot Country'
	1242	89.3	WCAL MN Northfield- cla	0040	106.1	WINN	IN North Vernon- Win 106
	1244	107.9	KQQL MN Anoka- Cool 108	0041	103.1	WJEZ	IL Pontiac- weather
	1258	95.5	KCHK MN New Prague	0043	100.9	WHOP	IL Hoopston- 101 Country
	1305	93.1	KXLP MN New Ulm- Classic 93	0046	107.7	WVCY	IL Milwaukee- // 98.9
	1311	97.7	KGCI IA Grundy Center- "The Adult FM, K-98"	0048	104.7	WCFL	IL Morris- Super CFL
	1314	97.9	KCMR IA Mason City	0058	98.1	WMGN	WI Madison- Magic 98
	1333	96.3	WJMC WI Rice Lake- Brewers baseball	0100	91.5	KNGA	MN St. Peter
				0102	89.7	WONU	IL Kankakee

Q93.5
KNIQ FM

Box 1300 • 341 Yorktown Pike
Mason City, Iowa 50401 • 515-423-1300

0109	96.7	WYTE	WI Whiting- K-White 96	0827	107.9	WYCO	WI Wausau
0110	95.9	WKMD	IL Aurora- ID	0853	95.5	WIFC	WI Wausau
0111	94.7	WOFM	WI Mosinee- ads	0900	99.3	KWAY	IA Waverly- Way FM
0120	105.3	KLYV	IA Dubuque- K-Live 105	0922	101.1	WIXX	WI Green Bay- rock in stereo
0131	99.3	WAJK	IL LaSalle	2145	97.1	KELN	NE North Platte- rare. Strong product of KQKQ-98.5 and KGOR- 99.9 mixing.
0135	92.7	WLRT	IL Kankakee- Lite rock 93, my farthest Class A heard	2345	105.7	KFXB	MO St. Genevieve
0152	104.3	WJMK	IL Chicago- ads	2353	94.3	KZMO	MO California
0155	96.3	WMLI	WI Sauk City- ID with Madison	8.11.92	Tropo		
0157	96.3	WBBM	IL Chicago	0022	103.3	KLOU	MO St. Louis- Clue 103
0158	94.7	WLS	IL Chicago, talk				Other St. Louis area stns on 88.1, 93.7, 98.1, 102.5, 106.5(IL) and 107.7 were heard.
0201	99.5	WPKR	WI Waupun- country	8.11.92	meteor scatter		
0202	89.5	KQAL	MN Winona- signoff	1831	97.5	WQBE	WV Charleston- "WQBE, There's only one..."
0203	89.9	WORT	WI Madison-	2252	97.5	WCIZ	NY Watertown- "CIZ- 97, with a larger selection of..."
0207	102.7	KQEQ	MN LaCrescent- oldies	2339	97.5	KYBS	MT Livingston- "KYB," (I'd count it, Mike. It's the only thing I can find that matches- trb)
0215	95.7	WSPL	WI LaCrosse- Mix 96	8.12.92	meteor scatter		
0757	107.1	WEAI	IL Lynnville	0144	97.5	WCOS	SC Columbia- "Hi, I'm ... and when I'm in Columbia, I spess country W-C-O-S"
0759	107.7	KMJM	MO St. Louis- local talk show	0833	97.5	WCSE	MI Bridgeman- "WCS? Bridgeman, the station..." Last letter sounded like a 'U' but is listed as 'E' (my books list the station but no calls- trb)
0800	94.7	KSHE	MO Crestwood- K-she 95	1434	97.5	WTGR	OH Union City- 'will lead Union City as they take on..."
0807	102.3	WRMJ	IL Aledo	1435	97.5	KDKK	MN Park Rapids- 'will be held in the Park Rapids..."
0814	97.5	WBBA	IL Pittsfield				
8.10.92	Tropo						
0106	105.3	KXLK	KS Haysville- old rock (metro Wichita- trb)				
0134	89.5	KOPN	MO Columbia- 'Imagination 251 Station'. Neat 2 minute jingle heard which gave address, freq., and even asked for money!				
0820	97.1	WCOW	WI Sparta- Cow 97				
0823	103.3	WWRW	WI Wisconsin Rapids				
0826	106.5	WLJY	WI Marshfield				



Bruce Elving's FM Atlas ...14th Edition

The world-famous guide which has served FM DX'ers for over 20 years is now available from NRC Publications at the special price of \$12.00. NY orders, please add sales tax.

Need more information about AM DX'ing?

Mail a 29¢ stamp to NRC Publications - P. O. Box 164 - Mannsville, NY 13661-0164, and ask for the NRC Product Catalog.

Facts About NRC's DX Audio Service

The DX Audio Service provides the ONLY monthly broadcast news cassette service to the DX community. Available to anyone anywhere, it is designed to inform the radio listener in a pleasing and informative manner. Many of the announcers on the service are professional broadcasters giving their free time to give the listener the finest service available.

DXAS was started to provide broadcast information, both AM and FM, to the visually-handicapped DX listener. It has evolved into a service which provides useful material to all types of listeners. Many subscribers listen to the tape to and from their place of work while driving. Features include not only news about DX, but also airchecks from radio markets, dialscans, frequency scans, and other items.

A one-year subscription is only \$25. Sample copy and back issues of DXAS: \$3

Cassettes are mailed by First Class mail, on or about the 20th of the month. For information, subscriptions, renewals, sample copies: write to Fred Vobbe, Publisher/Producer - 706 Mac Kenzie - Lima, OH 45805-1835.

Formats

Tony Fitzherbert

356 Jackman Avenue
Fairfield, CT 06430-1728

Changes in programming status; reported by listeners

Welcome to the end of summer Formats column. Here are the creative ideas of the leaders within the radio business as they lock horns with their rivals in the unending chase for a "Good Fall Book". Often, the format switch entails firing the on air staff and hooking up to a satellite for some canned feed which has no local market relevance at all. And for us, here are the latest changes, as we dust off our equipment for the 1992 - 1993 DX season.

My annual railroad trip was a small one....to Boston, Baltimore, and Washington, DC. A trip on the Baltimore Metro to Owings Mills carries one right by the new site for WEBB-1360, whose three towers are next to the portal of the subway portion of the line. Further out along the route, the train passes the three tower array of WBAL-1090, and then, near the Owings Mills terminal, the four towers belonging to WBCM-680. In Washington, the three towers of WINX-1600 are right next to the Red Line of Metro and the MARC Brunswick commuter line, just west of the Rockville Station. I believe that WOL-1450 has a rooftop antenna which is very visible right next to the Red Line and Amtrak just outside Union Station.

Our contributors for this edition of Formats are Eric Bueneman, of St. Louis, Phil Boersma, in Spring Lake, MI., Mark Hattam (Middlesex, England, who has recorded some nice catches across the Atlantic), and the M Street Journal. And Tom Bryant, Production Manager at WSM notes that the station now carries the Interstate Radio Network overnights. Here we go.....

540	WDXN	TN	Clarksville	- Country music (EB).
560	CHVO	NF	Carbonear	- Country music, VOCM overnights (MH).
590	WKZO	MI	Kalamazoo	- News, talk (PB).
590	WWLX	TN	Laurenceburg	- Country music "590 - WLX" (EB).
620	WSUN	FL	St Petersburg	- News, talk, some // WIOD and WSB.
700	KBYR	AK	Anchorage	- Talk (M).
710	WKXB	TN	Smyrna	- Country music, religion (EB).
740	WWNZ	FL	Orlando	- All talk (M).
770	QHQR	AB	Calgary	- Easy listening, soon to be talk (MH).
810	WDDJ	IL	Johnson City	- CWM//FM "3 D Country" (EB).
860	WYJZ	PA	Pittsburgh	- Urban oldies (M).
880	CHQT	AB	Edmonton	- Easy listening, news, information (MH).
900	WCEB	OH	Canton	- Adult standards (M).
900	CKBI	SK	Prince Albert	- AC/Oldies (MH).
910	WEPG	TN	South Pittsburgh	- Drops country music for AC (EB).
910	WRNL	VA	Richmond	- News, talk, sports (M).
920	WKYD	AL	Andalusia	- Unis standards, talk (M).
940	WINE	CT	Brookfield	- Still oldies, with CNN Headline News (TF).
950	KDSX	TN	Denison	- Talk (M).
960	KROF	LA	Abbeville	- Country, Cajun//FM (M).
960	CHNS	NS	Halifax	- Oldies (M).
960	KGKL	TX	San Angelo	- "Rock 96" (M).
970	WMAY	IL	Springfield	- Drops long standing country format for oldies (EB).
980	WLMX	GA	Rossville	- CNN Headline News (EB).
1010	WIOI	OH	New Boston	- Easy listening (M).
1030	KDUN	OR	Readsport	- Country music (M).
1060	CFCN	AB	Calgary	- CHR (MH).
1070	CHOK	ON	Sarnia	- Oldies (M).
1090	KING	WA	Seattle	- News, talk (MH).
1090	KBOZ	MT	Bozeman	- Country music, news, sports (MH). Nice catch!! (TF).
1110	WEBS	GA	Calhoun	- AC/CHR (EB).
1130	CKWX	BC	Vancouver	- Country music (MH).
1140	WAKK	MS	McComb	- SMN country music (M).
1140	KSSQ	TX	Conroe	- Gospel (M).
1170	CHGY	AB	Red Deer	- Country music (MH).
1180	WYLA	MI	Diamondale	- Black oldies (M).
1220	WERT	OH	Van Wert	- Oldies//FM (M).
1220	WCPH	TN	Etowah	- Country music (M).
1230	ZFB		Hamilton, Bermuda	- R & B, Reggae, Calypso, Gospel, religion at night (MH who heard this in England).
1230	WBOW	IN	Terre Haute	- Unis standards (M).
1240	KSUE	CA	Susanville	- Oldies (M).
1240	KEVA	WY	Evanston	- SMN AC (M).



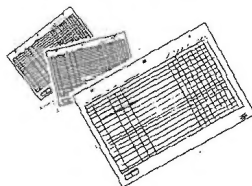
1260	CFRN AB	Edmonton	- "Oldies 1260" (MH).
1270	WKVY KY	Lousia	- AC//WKPE (M).
1270	CJCB NS	Sydney	- AC/Oldies (MH).
1270	WUCO OH	Marysville	- SMN Real Country (M).
1300	WXPX PA	West Hazelton	- Talk (M).
1300	CJME SK	Regina	- Oldies (M).
1310	WGH VA	Newport News	- All sports (M).
1320	WMSR TN	Manchester	- Country music (EB).
1340	WLAV MI	Grand Rapids	- 50's oldies (PB).
1340	KXEQ NV	Reno	- Spanish (M).
1340	KCRN TX	San Angelo	- Religion//FM (M).
1360	CKBC NS	Bathurst	- AC, Country music, easy listening, religion on Sundays (MH).
1360	WKOP NY	Binghamton	- SMN Real Country (M). This old call and format are back! (TF).
1380	KASP MO	St. Louis	- All sports (EB).
1380	KMUS OK	Muskogee	- Contemporary Christian (M).
1380	CKPC ON	Brantford	- AC/oldies (MH).
1380	WIZO TN	Franklin	- Oldies (EB).
1400	KUKI CA	Ukiah	- News, talk (M).
1410	KLQV TX	Athens	- Sun News, talk (M).
1420	WWEV GA	Decatur	- Ex-WAVO, BBN Religion//FM 91.5 (EB).
1420	KULY KS	Ulysses	- Country music (M).
1430	WCKN IN	Indianapolis	- SMN Real Country music (M).
1430	KROO TX	Breckenridge	- Country music//FM (M).
1440	WUNI MI	Bay City	- Unis CNN Headline News (M).
1440	CJCL ON	Toronto	- All sports (M).
1450	WFRA PA	Franklin	- MYL (MH - England!!!!). You heard this in Middlesex????? Lot to be said for those clear channel stations on 1450...seriously, an EXCELLENT bit of DX'ing!!! (TF).
1450	WMOC TN	Chattanooga	- Religion, talk (EB).
1460	WBPA KY	Elkhorn City	- AC//WKPE (M).
1460	KENO NV	Las Vegas	- Unis CNN Headline News (M).
1480	CKER AB	Edmonton	- Ethnic programming (MH).
1480	WKGF FL	Arcadia	- Southern Gospel (M).
1490	KMET CA	Banning	- SMN Adult standards (M).
1490	WCHM GA	Clarksville	- News, talk (M).
1490	WOHI OH	East Liverpool	- SMN Pure Oldies (M).
1490	KBIX OK	Muskogee	- AFR Talk (M).
1520	WHRF MD	Bel Air	- Talk (M).
1520	WQWQ MI	Muskegon Heights	- Nostalgia, big band (PB).
1530	WCRJ FL	Jacksonville	- Southern Gospel (M).
1530	WCEG MA	Middleborough	- Full service AC (TF).
1540	WYNC NC	Yanceyville	- Country music (M).
1550	WTRY TN	Soddy-Daisy	- AC "The Tiger" (EB).
1560	WMOM MD	La Plata	- SMN Country Music (M).
1560	WCDN OH	Chardon	- News, talk (M).
1560	WFAT MI	Portage	- Oldies//96.5 FM (PB).
1600	KCRG IA	Cedar Rapids	- Country Music (Another amazing catch from Mark Hattam, in England!!)

All for now! Please get your format changes in to your Formats column. Thanks to our contributors for a fine column. And good luck with the approaching fall DX season!

73's

Logsheets - By Frequency

110 sheets, 25 entries possible per sheet with space available to add your own columns. Punched for three-ring binders, full-size 8.5 x 11 inches, on heavy paper. US\$5.00 (25 sheets for US\$1.25). From NRC Publications (NY residents, add sales tax).



Promote the NRC and DX News and help us grow!

Planning to attend a DX'ers or hobbyist gathering? Include DX News in your plans. Upon request, we'll send you a packet of up to 50 recent DXN's to be given free to attendees. Just send a postcard to NRC - P. O. Box 5711 - Topeka, KS 66605. Packets are sent by Book Rate, so please allow 10 days for delivery. Thanks - and tell your friends that the NRC is on the grow!

For Beginners

Jack Woods - P. O. Box 1003
Waldport, OR 97394-0514

Information and advice of interest to inexperienced DX'ers

The decibel

Few issues of DX News appear without some use of the term "dB". The purpose of this "For Beginners" article is to present some basic ideas about dB, and the term for which it is the abbreviation, the "decibel".

The word decibel originated in the telephone industry. Telephone engineers needed a unit of measurement of sound levels which would approximate the response of the human ear. The unit which met that need was the "bel" (named for the inventor of the telephone, Alexander Graham Bell).

One of the characteristics of the normal human ear is its response to a difference of sound intensities. If two sounds of the same pitch are heard one after the other, such that one sounds twice as loud as the other, the actual audio power of one is not twice but about ten times that of the other. That ratio is true for two sounds of low intensity, and also for two which are loud. This means that the response of the human ear is not linear. It is logarithmic. (For those readers who have not thought about logarithms for a long time, or perhaps never have, there is a brief introduction to logarithms at the end of this article). For now we will consider that the quantity, one bel, refers to the power difference between two sounds of the same pitch, one of which sounds twice as loud as the other; therefore there exists a multiplication of sound power by a factor of 10. The bel proved to be too large for convenient use, so it was replaced by the decibel, abbreviated dB, which is one tenth of a bel.

Mathematically speaking, when comparing two different sound powers, the number of decibels is equal to ten times the common logarithm of the ratio of the powers.

$$\text{That is, } \text{dB} = 10 \log P_2/P_1$$

The decibel is of course widely used in electronics and applies to radio frequency power as well as to audio power. Some decibel relationships are commonly used and should be memorized: if one power is twice as large as the other, that equals 3 dB. If the ratio is ten to one, that is 10 dB. For 100 to one, it is 20 dB, and for a ratio of 1000 to one, 30 dB. When using decibels, we speak of gain or loss. If the input power to an amplifier is 1/100 of a watt (ten milliwatts) and the output power is one watt, the amplifier has 20 dB gain. If a length

of coaxial cable dissipates half the power input to it, and delivers the other half to the load, there is a 3 dB loss.

Note that in the preceding paragraph we dealt only with quantities of power, measured in watts. When dealing with voltage, the equation for dB is different. For voltage, dB equals 20 times the logarithm of the ratio of the voltages. Doubling of voltage represents a 6 dB gain. A voltage ratio of 10 to 1 equals 20 dB, and so on. When working with decibels it is important to know if the stated gains or losses are power or voltage gains or losses. When comparing voltages, the decibel equation is valid only for voltages measured across the same value of impedance.

Logarithms

The following is a brief introduction to the subject of logarithms.

Logarithms are systems in mathematics in which multiplication is reduced to addition, division is reduced to subtraction, and large, cumbersome numbers are reduced to shorter, more easily used numbers.

Logarithms were introduced in the early seventeenth century. English mathematician John Napier is credited with their invention. Logarithms have been widely used in engineering work and in financial work for many years.

The logarithms most widely used in the study of radio and other communications are known as common logarithms and are based on the number ten. By definition, the common logarithm of any number is the power (exponent) to which the quantity ten must be raised to equal that number. For example, since 10 to the third power equals 1000, the log of 1000 equals 3.

Similarly, since 10 to the second power (ten squared, or 10×10) equals 100, the log of 100 equals 2. Now, since the log of 100 equals 2, and the log of 1000 equals 3, we would expect that the log of a number between 100 and 1000 would be a number with a value between 2 and 3. It will be found with the aid of the tables of common logarithms found in mathematics textbooks and engineering handbooks, or by the use of an electronic calculator. For example, the log of 279 is 2.45 and the log of 623 is 2.79. The numbers 279 and 623 can be multiplied by adding the two logarithms together and finding the

antilogarithm of the sum. The antilogarithm [written "antilog"] is the number corresponding to a given logarithm and is found by reversing the process of finding the logarithm. Division can be done by subtracting one logarithm from the other, and finding the antilog of the result. The slide rule, that device universally used by engineers for

calculations until made obsolete by electronic calculators, did multiplication and division of numbers by mechanically adding and subtracting their logarithms.


Again, logarithms are used in calculations related to voice communications because the response of the human ear to sounds of different intensity is approximately

In the Beginning

John D. Bowker

The complete list of U. S. broadcast stations on the indicated frequency as published by the Federal Radio Commission in 1934. "S" = shared; "SH" = Specified hours; "T" = Transmitter location; "D" = Daytime operation only; "U" = Unlimited time

Frequency (kc)	Call letters	Main studio and transmitter location	Power	Time designation
1430, regional.	WFEA	Manchester, N.H.-----	500 w-----	U-Exp. (C. P. only).
	WOKO	Albany N.Y.----- (S.A.—Exp. See 1440 kc.)	500 w-----	Simultaneously Exp. with WCAH, WHP, WFEA, and WHEC.
	WHEC	Rochester, N.Y.----- (S.A.—Exp. See 1440 kc.)	500 w-----	Simultaneously Exp. with WCAH, WHP, WFEA, and WOKO.
	WCAH	Columbus, Ohio-----	500 w-----	S-WHP night (simultaneous D, WBAK, WHP)
	WBAK	Harrisburg, Pa.-----	1 kw-----	S.H.
	WHP	do-----	500 w-----	S.H., D. ⁵⁷
		T—Lemoyne.	1 kw LS-----	S-WCAH night.
	WNBR	Memphis, Tenn.-----	500 w-----	U.
	KGNF	North Platte, Neb.-----	500 w-----	D.
	KECA	Los Angeles, Calif.-----	1 kw-----	U.



The NRC AM Radio Logbook, 13th Edition, is the most accurate AM radio listing of stations in the U. S. and Canada. Only \$16.95; Canada \$17.95 to U. S./Canadian NRC Subscribers ONLY. \$19.95 to U. S., Non-NRC Subscriber; \$20.95 Canadian Non-NRC Subscriber. Others - please write. Remember - your purchase benefits the NRC.

Mail to: NRC Publications - Box 164 - Mannsville, NY 13661 (NY residents add sales tax). Or pick up your copy at Omaha!

NRD-525 AGC Mod ... by Dallas Lankford

As is well-known, an unmodified NRD-525 suffers from several serious AGC problems in AM mode, namely muffled (distorted) audio due to audio on the AGC line, hanging of the AGC due to noise spikes and other strong signals of brief duration, and inappropriate release times which cause poor audio quality for strongly fading SW signals and MW graveyards.

A number of mods for the NRD-525 AM mode AGC problems have been suggested in the past. But none of the previous AGC mods have been arrived at from an understanding of the NRD-525 circuitry, and none of the previous modifiers reported measurements of the modified AGC attack and release times. Apparently those previous mods were arrived at by tinkering with component values, and the effectiveness of those previous mods was determined by subjective evaluation rather than measurements of attack and release times using lab equipment. By contrast the AM mode AGC mod I will present in this note was arrived at by a mathematical analysis of the NRD-525 AGC circuitry, followed by a computer simulation using circuit analysis software, and the attack and release times were measured using a lab grade signal generator and a lab grade scope. The end result is the best AM mode AGC mod available at this time for the NRD-525. My mod is also much simpler than previous mods, and requires only the removal of one surface mount resistor and the addition of two jumper wires to the pins of an integrated circuit.

About 9 months ago I suggest an NRD-525 AM mode AGC mod in my article "NRD-525 AGC Mod, Preliminary Version 2, August 16, 1991." The basic idea was to disable the AM branch of the AGC circuit and to use the SSB/CW AGC circuit in all modes. The mod was untested because I had no NRD-525. Recently Russell Scotka sent me his NRD-525 to try out my ideas.

In the previous note I suggested removing R104, jumping pins 3 and 4 of IC7, and removing C78 and C79. This is what I tried first. But bad low frequency audio distortion in the FAST AGC setting was observed. The release times were measured and found to be about 25 ms for FAST and 500 ms for SLOW, much faster than my mathematical analysis and software simulation had suggested. Apparently there is a discharge path internal to IC9A equivalent to a 500K ohm resistor. In any case, this demonstrates the importance of measuring the results of any modification.

When C78 and C79 were restored and pins 8 and 9 of IC7 were jumped, the measured release times increased to 100 ms for FAST and 2 seconds for SLOW, which is about optimal. And no low frequency audio distortion was heard on received signals in either FAST or SLOW.

Consequently, the good news is that reception quality using the NRD-525 AM mode can be made much better (and much better than ECSS) by removing one surface mount resistor (R104) and adding two jumpers to pins of IC7 (pins 3&4 and pins 8&9). With these changes, AM FAST AGC is now excellent for fast bandscanning and for DXing steady or moderately fading signals, and AM SLOW AGC is now excellent for strongly fading SW signals and for nighttime MW graveyards provided not much thunderstorm static is present. Of course, any AGC with a 2 second release will hang briefly on strong noise spikes, and this SLOW AGC is no exception.

The bad news is that the SSB/CW AGC (which is now also the AM AGC) has rather bad overshoot. This is not a problem for AM signals. And, curiously, there is no audible pop or click on initial SSB transmissions as is often the case with overshoot. The NRD-525 also has undershoot on FAST release in SSB/CW mode. No audible evidence of the FAST release undershoot was observed on AM or SSB/CW signals. Because there was no audible evidence of the overshoot or undershoot in any mode, I did not try further modification to eliminate them. Perhaps the overshoot could be reduced or eliminated by replacing R103 with a higher value resistor. But tinkering with different values for R103 is not a good idea because a PC board trace goes underneath R103.

Russell Scotka has told me that he is very pleased with the improved AM performance of his "new" NRD-525. Before I modified the AM mode AGC of his NRD-525 he used ECSS for AM reception because of the original AM mode AGC problems and related poor AM mode audio quality of received signals. Now that the AM mode AGC problems have been eliminated with my mod, Russell has found that the AM mode provides much better audio quality than the tinny sounding ECSS he used previously. Curiously, Russell said that his NRD-525 passband tuning now works much better in AM mode than before. I have no explanation for why my AM mode AGC mod should improve the performance of NRD-525 passband tuning in AM mode, but apparently it does.

Musings

of the Members

Thoughts from NRC members ... the opinions expressed in this column are those of the individual writer and do not necessarily reflect those of the editors, publishers, or the National Radio Club, Inc.

KEN QNYSCHUK - 13602 WENTWORTH AVE. #3 - RIVERDALE, IL 60527

My new phone # is 708-841-6381, daily 5-10P(CDT) and weekends. I'm hoping to catch a ride to Omaha on Labor Day weekend, sharing the gas and good conversation is what I can offer. I'm taking a few weekend vacations via the Metro train. So far I've gone to Harvard, IL (Near WI line) and Kenosha, WI. Harvard was good as the park was near the train station and I was able to do a good AM-FM bandscan and hear some 10s for the first time, can't count them but the airchecks were nice! I went to Kenosha last Saturday but in packing things in a small suitcase and a heavy duty bag, I forgot to the cassette tapes in, that hurt! So I was stuck with taking just notes. I set up my gear on a picnic bench on the Lake Michigan shore in Simmons Island Park for a few hours, then later at Elchelman Park, 1 mile South. DXing was interesting but the mean 20 MPH East wind/mid 60's temp. made things a little chilly for July. Of the most desired stations, WGNH-1370 was heard with WLTW nulling tightly w/CBS baseball (I didn't think WGNH was a CBS affiliate). Even locally WMAQ, a CNN affiliate, carried a CBS Saturday night game from San Diego recently. I guess CBS has the option to "ferm" the national broadcast. Even WJJO-1160 carried the CBS games a few years ago. What's the NY-LA situation like? Continuing, I did try hard for WMEZ-1520 though I noted WLUV 5 WKVI. Also noted on 1520 "EZL music on 101.7 WQWQ", what's going on with legal ID's? Before I forget, on the 14th (July), WJPC-950 dropped its simulcast with 106.3 and is now playing "clean rap" and is Chicago's only rap station, it was desperate for better ratings. The train has many routes and for \$5 weekends you can ride it anywhere. Before closing, I enjoyed the baseball network lists. I am now working at a local family owned machine shop. Anyway, I'm looking forward to the convention and, hopefully, to share a ride! Have a good summer, friends!

BILL TOWNSHEND - 4500 CONNECTICUT AVENUE NW #901 - WASHINGTON, DC 20008-4326

I'm way past due for my annual re-intro. I'm 61 (Fren O'Brien's number while on the Redskins in early-mid 1980s), single & live on the top floor of a nine story yellow brick pile (not road-hill) in upper NW DC and work as a computer programmer for the National Weather Service (don't blame me for the weather-hill) on the 3rd floor of an 8 story pile of concrete, steel and glass (a real AM DX buster, FM not affected) 15 miles/24 km south of my den. I do most of my FM DX at the office just after arrival since my home is an image jungle due to many FM transmitters nearby. I wonder how the highly touted McIntosh MR85 would perform in the Bethesda-Chevy Chase area where most of the transmitters are located. Not much on the AM DX front since the DX Tests ended in the early spring. I celebrated my 51st birthday last May with a walk from my locale to the new Orioles playground, Oriole Park at Camden Yards via Glen Bernie (overnight) and Fort McHenry. In late June, I took advantage of weather to cool for the pool and did a 3 day 130 mile trek through southern Maryland including Solomons Island, which I visited the first time in 1938 when I was 7, I didn't hoof it 130 miles at that time [hi!]. I plan to be at the NRC convention in Omaha in early September if there is no WADXA gathering this year (the last one was in late October 90), the WADXA is considered to have folded after 12 years. LXXIII's

SHAWN AXELROD - 30 BECONTREE BAY - WINNIPEG, MB R2N 2X9

Greetings from the Great White North where everything is green, very green! We have had more rain in the last 2 months than we have had in about 4 years. Unfortunately the DX has been the worst in the last 5 years. 2 trips to the Vellhalla Beach eight netted on 1 new catch. The PLAM or Phase Locked AM board mentioned previously has been tested out well. The board is well worth the price as it does make a difference. The New Zealand catch on 756 would have been nothing more than a hot except for the PLAM board. The board is produced by ESKA & WDVIS in Sweden and makes the old Icom R70 into a new rig. The board, once engaged, locks onto the signal when you are in the sideband mode of your choice. By using the PBT on the Icom, you can really make the signals peak. Several times now, Cayman Islands-1555 has been made quite clear with the PLAM board. This is truly the ultimate add-on for Icom & NRG users. Now if conditions would improve so I can go after some good DX, I will be very happy. Watch out for new loggings once the new season gets underway in September. Take care & best of DX to all of you, 73

DAVE SCHMIDT - P O BOX 11502 - WILMINGTON, DE 19850

This is everything received thru the 14th and our next deadline will be the week prior to the publication deadline. It looks like the mail is taking 2-3 days to get here from just about anywhere in the US so keep that in consideration when sending in reports. No additional news on any of the CP's pending for the area, WFI-1460 is still not on regular scheduled but has been running ET's again. And that is it, see you in a couple (of weeks, that is!) 73

NRC DXCon - '92 in Omaha

Still trying to make up your mind about attending the convention? 40+ DX'ers haven't - they've already pre-registered for four days of fun.

The registration fee of \$40 includes tours of KIOS-FM 91.5 and your own Omaha Marketscope cassette ... A tour of the Strategic Command HQ, Offutt AFB (formerly SAC) ... A tour of Union Pacific's national computer center ... A tour of Omaha's 911/Emergency Ops Center ... Plus all regular banquets, the auction, meeting rooms, and hours and hours of good conversation with 40+ people whom you don't have to explain what "DX" means!

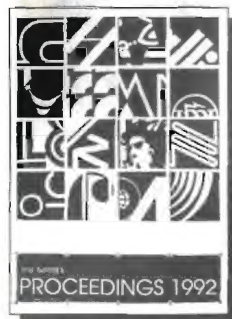
Here's how easy it is to attend: Send \$40 (payable to "National Radio Club") to Ernie Wesolowski - 13312 Westwood Lane - Omaha, NE 68144-3543. Or you can register on site.

Hotel reservations go to Days Inn - 3001 Chicago St. - Omaha, NE 68131, phone (402) 345-2222. You must mention the "NRC Convention" to receive the special rate of \$46.00 plus \$7.52 tax per night.

special needs? Arrangements for the visually impaired, airport/train/bus pickup transportation, roommate matching ... all available if you call Ernie at (402) 330-7758. The Big O team will work with you to make a fun time easy for you to attend.

But plan NOW to attend; the convention is just a few days away, September 4, 5, 6. Your hosts: Ernest Wesolowski, Carl Mann, Curn Chadwick, Mike Hawk, Neil Zank, Bob McCoy, Lonnie Merritt, Dan Bartek, Bob McCoy, and Skip Dabelstein.

Can't make it? Why not call and say hello to your friends at the convention Saturday morning, 9:30-11:30 CDT at (402) 345-2222, and ask for the Nebraska Room. No collect calls!



Fine Tuning's *Proceedings 1992* is this year's information-packed collection of in-depth reviews, articles, and features for the SWBC DXer. This 5th anniversary edition, at more than 200 pages, will be a valuable addition to your reference bookshelf. Some of the most experienced DXers in the hobby have contributed to this 1992 volume, and each article has been thoroughly examined for clarity and content by the *Proceedings* Review Panel. Included are reviews of receivers and accessories, features on various topics including antennas, shortwave history, and more. This is an essential guide for any DXer.

Proceedings 1992 is shipping now. The cost is \$19.50 plus \$4.00 postage (US funds on a US bank). Outside of North America, postal costs are \$5.00 surface book rate (3-4 months typical delivery time) or \$17.00 airmail. Make checks or money orders payable to Fine Tuning Special Publications and mail to: Fine Tuning Special Publications, c/o John Bryant, RRT #5 Box 14, Stillwater, OK 74074 USA. Special notice: Limited quantities of previous *Proceedings* editions are available (1988, 1989, 1990, 1991). Price and shipping costs same as above.